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A method is provided for transcoding between video signals in two standards, DV and MPEG-2, each standard including discrete cosine transform (DCT) compressed signals. The each of the signals have macroblocks containing a plurality of DCT blocks. The DCT blocks are quantized according to respective quantization methods defined by the standards. The coefficients in each block are zigzag scanned, run-length coded and variable-length coded. The process variable-length decodes the coefficients and translates the quantized coefficients in the DV standard into quantized coefficients in the MPEG standard without fully dequantizing at least some of the DV coefficients and without performing an inverse DCT operation on any of the DCT coefficients. DV blocks that are encoded in a 248 format are translated into an 88 format before they are converted to MPEG-2 blocks. A method for transcoding from MPEG-2 to DV is also described. The MPEG-2 signals are intra-frame encoded, have a 4:2:2 chrominance format and an 88 frame-encoded block format. According to this method, converted 88 DV blocks that represent significant intra-field motion are converted from the 88 format to a 248 format. The method also controls which overflow coefficients in the DV signal are transcoded into corresponding coefficients in the MPEG-2 signal to control the data rate of the MPEG-2 signal.